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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/654,956 | 09/05/2003 | Perry Philp | 213-043/HRH | 7920 |
| 1059 | 7590 | 10/06/2006 | EXAMINER | |
| BERESKIN AND PARR 40 KING STREET WEST BOX 401 TORONTO, ON M5H 3Y2 CANADA | | | MATZEK, MATTHEW D | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1771 | |

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/654,956 | Applicant(s) PHILP ET AL. | |
| | Examiner Matthew D. Matzek | Art Unit 1771 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 35-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-34 and 46-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>2/3/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The affidavit filed on 6/9/2006 under 37 CFR 1.131 has been not been considered and is therefore ineffective to overcome the Gray et al. (US 2004/0185734) reference. The affidavit has not been signed by all of the Applicants as required. Also, the pictures set forth in the affidavit only set forth the creation of the reinforcing net of withdrawn claim 1. The affidavit should provide evidence of the ribbon of claim 13's existence, prior to the Gray et al. reference. Claims 1-67 are currently active, but claims 1-12 and 35-45 are currently withdrawn. New claims 46-67 contain no new matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "conduit" in claims 46-67 is used by the claim to mean "a laminated ribbon", while the accepted meaning is "a hollow article or tube." The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 46-57 and 59-66 are rejected under 35 U.S.C. 102(b) as being anticipated by Sasaki et al. (US 5,338,593).

Sasaki et al. teach a multi-axial nonwoven fabric which is in turn adhesively bonded to a warp material (Abstract). The warp material may be bonded on both sides of the fabric material (col. 3, lines 45-53). Figures 1-3C provide for the instantly claimed warp and weft fiber orientations with the warp fibers extending in the horizontal direction. Claims 50, 51, 62 and 63 are anticipated as Figure 3C shows the weft yarns extending at an angle of substantially 45°. Further support for this specific angle value is provided by the Abstract, which states that the yarns are oriented in right triangles.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 58 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (US 5,338,593) as applied to claim 57 above, and further in view of Waters (US 6,158,447).

The disclosure of Sasaki et al. is silent as to the use of a reinforcing wire.

- a. Waters teaches a flexible duct comprising a reinforcing scrim **16** and a wire resilient helix (reinforcing wire) **14** (Figure 3). The scrim provides the duct with high tensile strength and excellent tear resistance in all directions. The wire and scrim are sandwiched between the inner and outer walls of the flexible duct (Abstract). The resilient helix provides the duct with rigidity, while allowing it to flex about several

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points (col. 1, lines 25-30). The tape used to form the outer wall **12** is also simultaneously fed onto the mandrel to overlap itself and to be offset (col. 2, lines 65-67).

b. Since Waters and Sasaki et al. are from the same field of endeavor (i.e. fabric-reinforced articles), the purpose disclosed by Waters would have been recognized in the pertinent art of Sasaki et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the reinforcing fabric of Sasaki et al. with the reinforcing wire of Waters. The skilled artisan would have been motivated by the desire to provide the reinforcing fabric with rigidity, while allowing it to flex about several points (col. 1, lines 25-30, Waters).

5. Claims 13-16, 19-24, 26-28 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tuppin et al. (US 6,004,891) in view of Gray et al. (US 2004/0185734 A1).

a. Tuppin et al. teach a composite fabric comprising a load-carrying grid **3** disposed between cloth **2** and a flexible layer **4** (Figure 1). The load-carrying grid is at least made up of a warp **33** and a weft thread **31** (Abstract, Figure 1). The flexible layer and cloth may be held together with adhesive (col. 3, lines 52-55). The Examiner takes the position that as the flexible and cloth layers are held together by adhesive they would also necessarily be affixed to the load-carrying grid via adhesive as well. The invention of Tuppin et al. is silent as to the use of spreader yarns.

b. Gray et al. teach a fabric substrate for use in reinforcing laminated and coated fabrics (Abstract). In the first embodiment of the invention the fabric substrate is made by a weft insertion method and the warp and weft yarns are tied or knitted together by a

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third yarn [0009]. Examiner equates the outside warp yarn of Figure 6 (furthest left vertical yarn) to the instantly claimed spreader yarn, the remaining vertical yarns constitute warp yarns and the remaining yarns 12 are equated to the instantly claimed weft yarns (Figure 6). The illustration of Figure 6 is to show only part of the fabric substrate. The other side is a mirror image with the same loops 24.

c. Since Tuppin et al. and Gray et al. are from the same field of endeavor (i.e. reinforcement fabrics), the purpose disclosed by Gray et al. would have been recognized in the pertinent art of Tuppin et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the composite of Tuppin et al. with the reinforcement fabric of Gray et al. The skilled artisan would have been motivated to create an article comprising a reinforcement fabric that is less likely to tear away from itself along its edges due to the loops [0034, Gray et al.].

e. Claim 20 is rejected as the warp yarns are adjacent (on either side) to the weft yarns (Figure 6, Gray et al.). Claim 22 is rejected as the spreader yarns are parallel to the warp threads (Gray et al.) and the warp threads of Tuppin et al. extend in the longitudinal direction.

f. Claims 19, 21, 31 and 33 are rejected as it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the reinforcing fabric of Gray et al. with a plurality of warp yarns between the weft yarns. The skilled artisan would have been motivated by the desire to create a reinforcing fabric

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would improve the structural integrity of the fabric by having the warp yarn located between the weft yarns.

g. Claim 34 is rejected as it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have laterally offset the first substrate from the second substrate of Tuppin et al. The skilled artisan would have been motivated by the desire to selectively impart reinforcement to one substrate over a second or use the excess fabric for bonding/attachment to another substrate.

6. Claims 13-16, 19-24, 26-28 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. (US 2004/0185732 A1) in view of Tuppin et al. (US 6,004,891).

The inventions of Gray et al. and Tuppin et al. have been previously disclosed. The disclosure of Gray et al. is silent as to being adhesively fixed between two substrates.

a. Since Gray and Tuppin et al. from the same field of endeavor (i.e. reinforcement fabrics), the purpose disclosed by Tuppin et al. would have been recognized in the pertinent art of Gray et al.

b. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have adhesively bonded two substrates to the reinforcement fabric of Gray et al. The skilled artisan would have been motivated to create an article comprising a reinforcement fabric that is less likely to tear away from itself along its edges due to the loops [0034, Gray et al.].

c. Claim 20 is rejected as the warp yarns are adjacent (on either side) to the weft yarns (Figure 6, Gray et al.). Claim 22 is rejected as the spreader yarns are parallel to the

warp threads (Gray et al.) and the warp threads of Tuppin et al. extend in the longitudinal direction.

Claims 19, 21, 31 and 33 are rejected as it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the reinforcing fabric of Gray et al. with a plurality of warp yarns between the weft yarns.

The skilled artisan would have been motivated by the desire to create a reinforcing fabric would improve the structural integrity of the fabric by having the warp yarn located between the weft yarns.

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. (US 2004/0185734 A1) in view of Tuppin et al. (US 6,004,891) as applied to claim 24 above, and further in view of Waters (US 6,158,477). The inventions of Gray et al. and Tuppin et al. are silent as to the use of a reinforcing wire.

a. Waters teaches a flexible duct comprising a reinforcing scrim **16** and a wire resilient helix (reinforcing wire) **14** (Figure 3). The scrim provides the duct with high tensile strength and excellent tear resistance in all directions. The wire and scrim are sandwiched between the inner and outer walls of the flexible duct (Abstract). The resilient helix provides the duct with rigidity, while allowing it to flex about several points (col. 1, lines 25-30).

b. Since Waters and Gray et al. are from the same field of endeavor (i.e. fabric-reinforced articles), the purpose disclosed by Waters would have been recognized in the pertinent art of Gray et al.

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c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the reinforcing fabric of Gray et al. with the reinforcing wire of Waters. The skilled artisan would have been motivated by the desire to provide the reinforcing fabric with rigidity, while allowing it to flex about several points (col. 1, lines 25-30, Waters).

8. Claims 17, 18, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gray et al. (US 2004/0185734 A1) in view of Tuppin et al. (US 6,004,891) as applied to claims 13 and 24 above, and further in view of de Meyer (EP 0425099 A2). The inventions of Tuppin et al. and Gray et al. are silent as to the use of weft yarns at 45 degrees to the spreader yarns.

a. De Meyer et al. teach a fabric reinforced product comprising a mesh fabric **8**, longitudinal filaments (weft) **10, 11**, and carrier threads (warp) **14** (Abstract and Figure 2). The de Meyer et al. invention may be formed by inserting the mesh fabric between two layers of two layers of extrudable matrix (col.4, lines 15-20). In general, it is preferred that the meshes defined by sides making an angle of 40° to 80° and preferably 45° to 65° with the longitudinal direction of the fabric (col. 6, lines 5-9).

b. Since Gray et al. and de Meyer et al. are from the same field of endeavor (i.e. fabric-reinforced products), the purpose disclosed by de Meyer et al. would have been recognized in the pertinent art of Gray et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the weft yarns extend at an angle of at least 45° to the spreader (longitudinal) yarns. The skilled artisan would have been motivated by the desire to create a reinforcing fabric that provides lateral as well as torsional support.

Response to Arguments

9. Applicant's arguments filed 6/9/2006 have been fully considered but they are not persuasive.

10. Applicant argues that neither Tuppin nor Gray disclose articles that would or could be used in association with a substrate to comprise a ribbon. As set forth supra the applied art reads on the instant inventions.

11. Applicant argues that since Tuppin is silent as to the use of spreader yarns, which is important to the instant invention the Tuppin reference is not relevant. Examiner agrees that Tuppin is silent as to the use of spreader yarns, however Gray has been relied upon for such a teaching.

12. Applicant argues that there is no motivation to use Gray to create an article that reads on new claim 46. Examiner has not used Gray in the rejection of claim 46.

13. Applicant argues that there is no indication of any yarn in Figure 4 or 5 of Gray that would serve the function of a spreader yarn. Examiner agrees and has relied upon Figure 6 for such a teaching. Applicant continues by arguing that there is no support for Examiner's assertion that the leftmost warp yarn serves as a spreader yarn. Examiner takes the position that as the weft yarns wrap around the leftmost warp yarn it necessarily functions as a "spreader yarn" because of its orientation to the weft yarns. Applicant is correct in assuming that Examiner feels that fabric of Figure 6 is just part of the fabric of Gray and does not show the right-sided edge of the invention. The right side of the fabric would have the same structure as the illustrated left side and as such would possess the second spreader yarn.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

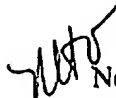
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mdm

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Norca L. Torres-Velazquez
Primary Examiner
Art Unit 1771

9/15/06